

Before the
Federal Communications Commission
Washington, DC 20554

ORIGINAL
RECEIVED

AUG 24 1992

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)

Review of the Commission's)
Regulations Governing Television)
Broadcasting)

MM Docket No. 91-221

RECEIVED

AUG 24 1992

ORIGINAL
FILE

To: The Commission

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

COMMENTS OF ACT III BROADCASTING, INC.

Richard Ballinger
President & CEO
ACT III Broadcasting, Inc.
110 E. 59th Street
New York, NY 10022

Donald D. Wear, Jr.
Attorney at Law
1776 K Street, N.W.
Washington, DC 20006

William Lilley, III
Policy Communications
1615 L Street, NW
Washington, DC 20036

Lawrence DeFranco
Program Flow, Inc.
1937 Kirby Road
Falls Church, VA 22043

August 24, 1992

No. of Copies rec'd
List A B C D E

0414

Before the
Federal Communications Commission
Washington, DC 20554

RECEIVED

AUG 24 1992

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

RECEIVED

AUG 24 1992

Communications Commission
Office of the Secretary

In the Matter of)

Review of the Commission's)
Regulations Governing Television)
Broadcasting)

MM Docket No. 91-221

To: The Commission

COMMENTS OF ACT III BROADCASTING, INC.

Richard Ballinger
President & CEO
ACT III Broadcasting, Inc.
110 E. 59th Street
New York, NY 10022

Donald D. Wear, Jr.
Attorney at Law
1776 K Street, N.W.
Washington, DC 20006

William Lilley, III
Policy Communications
1615 L Street, NW
Washington, DC 20036

Lawrence DeFranco
Program Flow, Inc.
1937 Kirby Road
Falls Church, VA 22043

August 24, 1992

TABLE OF CONTENTS

SUMMARY.....	iii
INTRODUCTION.....	1
I. DEVELOPMENTS IN THE ROCHESTER AND BUFFALO MARKETS CONSTITUTE A CASE STUDY OF HOW THE US TELEVISION INDUSTRY HAS CHANGED SINCE THE DUOPOLY RULE WAS ADOPTED AND WHY, THEREFORE, THE PRESENT RULE IS ANACHRONISTIC AND SHOULD BE MODIFIED.....	3
A. 1992 Is Not 1964.....	5
B. Media Landscape Topography In Buffalo And Rochester Has Changed Dramatically In The Nearly Thirty Years Since The Present Duopoly Rule Was Adopted.....	6
II. PROPOSED MODIFICATION OF THE DUOPOLY RULE.....	8
A. The Original Rationale For Selecting Grade B Standard Was Weak And No Longer Applies.....	9
B. In Any New Rule The Commission Should Adopt An Overlap Standard Which Is The Most Relevant Factual Measure Of Industry Economic Behavior.....	10
C. Despite Relative Geographic Proximity, Most Television Markets, Such As Buffalo And Rochester, Are Completely Separate And Distinct Economic Entities And Station Operations Are Largely Unique To Each Market.....	12
D. Grade A Service Contour Standard Is A More Contemporary And Factually Relevant Tool, Particularly In The Rochester and Buffalo Markets, For Addressing The Commission's Concerns As Expressed In The Duopoly Rule.....	15
E. UHF Station Overlap Standard.....	21

F.	<u>De Minimis</u> Overlap Waiver Standards Should Be Clarified And Liberalized.....	22
1.	The Current <u>De Minimis</u> Waiver Standard Lacks Administrative Clarity and Certainty.....	23
2.	The <u>De Minimis</u> Overlap Waiver Standard Should Be A Fixed One Based On Population and Service Availability Within The Overlap Area.....	24
G.	There Is No Interplay Between Changes In The Duopoly Rule And National Ownership Limitations.....	27
	CONCLUSION	30

FIGURES

Figure 1 - Population Concentration Within Grade A Contour.....	17a
--	-----

TABLES

Table A - City Comparisons 1964 - 1992	Tab A and 5
Table B - Station Growth 1964 - 1992	Tab B
Table C - Cable Service Within Buffalo ADI	Tab C
Table D - Cable Service Within Rochester ADI	Tab D
Table E - WUTV(TV) Program Schedule	Tab E
Table F - WUHF-TV Program Schedule	Tab F

AFFIDAVITS

Affidavit of Willard J. Stone	Tab 1
Affidavit of Heather Farnsworth	Tab 2
Affidavit of Ronald C. Inman	Tab 3

SUMMARY

The present version of the Commission's duopoly rule has become anachronistic in light of the tremendous growth of abundance and diversity in video services nationwide since the present rule was adopted in 1964. This conclusion is particularly evident in the Rochester and Buffalo television markets, which may be used as a case study for demonstrating why the rule should be modified.

With the growth in over-the-air services, cable television and other video service options in the Rochester and Buffalo markets, the Commission's goal of maximizing diversity has been achieved and secured for the future. The only residual Commission concern in the duopoly rule should be to insure that there is no abuse of economic power due to the common ownership of contiguous stations.

Experience with ACT III's stations WUHF-TV, Rochester and WUTV (TV), Buffalo demonstrates that despite Grade B overlap, television stations in these markets are managed as completely separate economic and operating units and that common control of stations in each market poses no threat of undue concentration of economic power:

- in local programming, only 2.5 hours during weekdays and 3 hours on weekends constitute identically scheduled programming on both stations;
- in local advertising, virtually none (0-1%) of each station's revenue comes from businesses located in the other's market.

Accordingly, the Commission can adopt a narrower standard of prohibited contour overlap than that presently used. The Commission should adopt an overlapping Grade A standard for prohibiting common ownership or control of television stations, or at least adopt such a standard for UHF television stations. Such a standard would be a more contemporary and utilitarian measure of station economic power.

The economic power of a television station is ultimately derived from its household circulation. The overwhelming portion of a station's circulation is derived from its ADI or Grade A service area, as the example of WUHF-TV and WUTV (TV) shows:

- WUHF-TV -- 89.4% of HH w/in Grade A
- WUTV (TV) -- 92.2 % of HH w/in Grade A

Correspondingly, the majority (100% for Rochester) of each station's local revenues, an important measure of economic power, comes from its ADI/Grade A area. The area between a station's Grade A and Grade B is largely irrelevant to the station's economic power. The Buffalo/Rochester example proves that a Grade A duopoly standard is sufficient to address the Commission's concern for undue concentration of economic power. This is especially true for UHF stations which continue at a technological and economic disadvantage to VHF service.

Further, the "de minimis overlap" standard should be clarified and liberalized to permit contour overlap in situations where the adverse impact of such common ownership or control is negligible. A fixed standard based on population and service availability in the overlap area should be substituted for the present ad hoc approach.

Before the
Federal Communications Commission
Washington, DC 20554

RECEIVED
AUG 24 1992
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
Review of the Commission's) MM Docket No. 91-221
Regulations Governing Television)
Broadcasting)

To: The Commission

COMMENTS OF ACT III BROADCASTING, INC.

ACT III Broadcasting, Inc. ("ACT III"), by its attorney, hereby submits its comments in response to the Commission's May 14, 1992 Notice of Proposed Rulemaking ("Notice"), FCC 92-209, released June 12, 1992, in which the agency solicited public comment on certain of its regulations governing television broadcasting in light of marketplace developments.

INTRODUCTION

ACT III Broadcasting of Buffalo, Inc. ("ACT III - Buffalo"), licensee of WUTV (TV), Buffalo, New York, and ACT III Broadcasting of Rochester, Inc. ("ACT III - Rochester"), licensee of WUHF-TV, Rochester, New York, are wholly-owned subsidiaries of ACT III. By Memorandum Opinion and Order, File No. BALCT-890829KF, 5 FCC Rcd 3842 (1990), extension granted, 6 FCC Rcd 7479 (1991), the Commission ordered ACT III - Buffalo to divest itself of all interest in, and

connection with, WUHF-TV pursuant to the application of Section 73.3555 (a) (3) of the Commission's rules, in as much as the Grade B contour of WUHF-TV overlaps slightly with the Grade B contour of commonly controlled WUTV (TV).¹ Accordingly, few other parties will be as directly, immediately and substantially affected by this rulemaking as will ACT III. Further, few other parties have such pertinent experience regarding the efficacy and ramifications of the Commission's multiple ownership rules, and specifically the "duopoly" rule.²

In ACT III's experience, the present duopoly rule has lost its relevance and utility and should be substantially modified to conform to the current realities of the television marketplace.

¹ As noted in the text, the temporary waiver of the divestiture requirement was extended to December 20, 1992. Footnote 32 of the Notice, tolls the present divestiture schedule pending the outcome of this proceeding and Section XI of the Notice further extends the temporary waiver until Commission action with respect to Section 73.3555 (a) (3) in the proceeding becomes final.

² ACT III is primarily concerned with the so-called duopoly rule, Section 73.3555 (a) (3) of the Commission's rules and, therefore, will direct its comments principally to that portion of the Notice pertaining to the duopoly rule and its interrelationship with national ownership limitations. ACT III is generally supportive of all the Commission's proposals to modify and relax the rules as set forth in the Notice.

I. DEVELOPMENTS IN THE ROCHESTER AND BUFFALO
MARKETS CONSTITUTE A CASE STUDY OF HOW THE US
TELEVISION INDUSTRY HAS CHANGED SINCE THE
DUOPOLY RULE WAS ADOPTED AND WHY, THEREFORE,
THE PRESENT RULE IS ANACHRONISTIC AND SHOULD
BE MODIFIED.

The present version of the duopoly rule was adopted in 1964,³ when the Commission substituted a fixed contour overlap standard for a previously subjective test adopted in 1940.⁴ The stated purpose of the prohibition on common ownership or control of stations broadcasting in substantially the same service area was ". . .to promote maximum diversification of program and service viewpoints and to prevent undue concentration of economic power contrary to the public interest."⁵ But in the over-quarter of a century which has passed since the present rule was adopted, the country and its media landscape have changed radically. Those changes in media abundance, diversity and competition, many of which were initiated, stimulated and sustained by Commission policies, now compel modification of the

³ Report and Order in Docket 14711, 45 FCC 1476, 1480 (1964), on reconsideration, 33 RR 2nd 1554 (1964).

⁴ Rules and Regulations Governing Experimental Television Broadcast Stations, 5 Fed. Reg. 2382, 2384 (1940).

⁵ Report and Order, supra at 1477.

Commission's multiple ownership rules and, specifically, the duopoly rule.

The Commission has documented well the nationwide growth of abundance, diversity and competition in audio/visual media generally and television specifically.⁶ ACT III will not repeat here the wealth of nationwide data already accumulated by the Commission in this and other proceedings. Rather, ACT III will concentrate on how developments in Rochester and Buffalo parallel changes in the country and the nationwide growth in media and, therefore, how those markets and the minimal overlap of the ACT III stations' Grade B contours serve as a case study of why the duopoly rule is anachronistic and deserving of substantial modification.

The most important finding from an analysis of the two markets is that, despite Grade B overlap of the stations, they are completely separate and distinct markets from both service and economic points of view. Each market is distinctive and each station's operations are tailored to the unique audience tastes and business requirements of their respective markets. Grade B contours, and even to a certain extent, Grade A contours, are of little relevance to the operating decisions each station makes, particularly from an

⁶ See, inter alia, F. Setzer and J. Levy, Broadcast Television in a Multichannel Marketplace, FCC Office of Plans and Policy Working Paper No. 26, 6 FCC Rcd 3996 (1991) and comments filed in Notice of Inquiry, MM Docket No. 91-221.

economic perspective. There may be contour overlap, but there is clearly no business overlap nor any collusion between the stations resulting in an abuse of economic power.

A. 1992 Is Not 1964.

It seems almost trite to say it, but times and the country have changed dramatically in a quarter of a century. Buffalo and Rochester have changed as well. Table A below shows just how much the two cities have changed through a comparison of census data.

Table A

CITY COMPARISONS

1960 Census Data v. 1990 Census Data

	<u>BUFFALO</u>		<u>ROCHESTER</u>	
	<u>1960</u>	<u>1990</u>	<u>1960</u>	<u>1990</u>
Population	532,759	1,232,000	318,611	1,119,000
Retail Sales*	3,592	8,400	2,496	8,200
Manufacturing Units	4,893	1,970	7,113	6,226
Manufacturing Value Added**	3.13	1.6	4.79	5.1

* In Millions of 1992 Dollars ** In Billions of 1992 Dollars

B. The Media Landscape Topography In Buffalo And Rochester Has Changed Dramatically In The Nearly Thirty Years Since The Present Duopoly Rule Was Adopted.

The number of radio stations in Buffalo has increased thirty-five percent (35%) to twenty-three (23) stations since 1964; the increase in Rochester is more dramatic, sixty-one percent (61%) to twenty-one (21) stations.⁷ The number of television stations in Buffalo has increased sixty percent (60%) since 1964 to eight (8) stations; Rochester, a smaller market, has nonetheless increased the number of television voices by twenty-five percent (25%) to five (5) stations.⁸

As impressive as this growth in over-the-air media is, the most dramatic change in diversity since 1964 has come in the development of multi-channel cable TV. Cable television was non-existent in the Buffalo and Rochester markets in 1964.⁹ In 1992, eighty-five and forty-six one-hundredths percent (85.46%) of the television households in the Buffalo ADI are passed by cable television systems offering a channel capacity ranging from twelve (12) to eighty (80) channels of service, with the average being at least thirty-five channels

⁷ See Table B.

⁸ Id.

⁹ See Tables C and D.

of service.¹⁰ Fifty-eight and three-tenths percent (58.3%) of Buffalo's ADI households actually subscribe to cable service.¹¹

The cable story is even more telling in Rochester. Again, in 1964 cable just did not exist.¹² In 1992, virtually all of the television households in the Rochester ADI are passed by cable and seventy-three and four-tenths percent (73.4%) of Rochester's television households are cable subscribers to systems which have the capacity, on average, of thirty-six channels.¹³

The home video cassette player did not exist as a consumer item in 1964. In 1992, there are 504,500 home video machines in the Buffalo market or an eighty percent (80%) TV household penetration rate and 292,800 in the Rochester market or an eighty-two percent (82%) penetration rate, giving the home television audience ultimate control over the diversity of their viewing.¹⁴

¹⁰ See Table C and the 1992 Broadcasting & Cable Marketplace at p. E-27.

¹¹ Id.

¹² See Table D.

¹³ See Table D and the 1992 Broadcasting & Cable Marketplace at p. E-76.

¹⁴ Arbitron Ratings (May 1992) for Buffalo and Rochester.

The irrefutable conclusion of this data is that the Rochester and Buffalo television markets, as well as the country at-large have changed significantly since the duopoly rule was adopted, and that competition and diversity in television at both micro and macro-levels have been assured, now and for the future. Commission rules, such as the duopoly rule, whose original aim was to foster competition and diversity and protect against undue economic concentration should be revisited and modified to conform to current marketplace realities and future, not past, Commission concerns.

II. PROPOSED MODIFICATION OF THE DUOPOLY RULE

ACT III believes that the data presented above, as well as that already on record in other proceedings, conclusively demonstrates that the Commission's policies have assured irreversible competition and diversity in the television marketplace, and that, in service of the public interest, government attention need only focus now and in the future on potential undue concentration or abuse of economic power.

ACT III believes that the Commission's concerns about undue concentration or abuse of economic power can be effectively addressed by adopting a standard which prohibits only overlap of Grade A service contours. In fact, a Grade A

standard may be more than is necessary to address the Commission's concerns.

**A. The Original Rationale For The Grade B
Standard Was Weak And No Longer Applies.**

The Commission's decision to apply a Grade B standard for television duopoly overlap was not sui generis, but derivative from the radio standards it adopted. There is no extensive discussion in the Commission's decision of the merits or disadvantages of television contours for assessing the degree of competition, diversity or concentration of economic power in such terms as the number of viewers affected, percentage of total viewership within a specific contour, economic relevance of the contours or extensive analysis of viewing alternatives within a specific contour. The Commission merely concluded:

"It is beyond dispute that television has a considerably greater impact upon the public today than does either of the aural services. Moreover, there are many fewer television channels available than in the aural services. For these reasons, we have concluded that a more restrictive overlap rule is required for television and we have based the final rule on prohibited overlap of Grade B service contours.¹⁵

More important than the conclusory nature of the Commission's decision is that the crucial factual premise of the decision has been eroded. As noted above, a vital part

¹⁵ Report and Order, supra at 1484.

of the Commission's reasoning was that television channels and video services were scarce, or at least, less abundant than radio channels and aural services. Indeed, the Commission went on to observe that, "In many areas of the country today, Grade B television signals provide the only available service . . ."¹⁶ This is simply no longer factually true.

As shown above, in the WUTV (TV) and WUHF-TV Grade B overlap area alone, a television viewer has available, in addition to WUTV (TV) and WUHF-TV, eleven (11) full power television stations and one low power station, for a total of fourteen (14) over-the-air viewing options.¹⁷ Further, thirty-five or more channels of cable service are available to sixty-six percent (66%) of the population of the overlap area.¹⁸ On a nationwide basis a similar abundance and diversity of video services can be found in any given market.

¹⁶ Id.

¹⁷ See Petition for Waiver File No. BALCT-890829KF at 6.

¹⁸ See Id. and 60 Television & Cable Factbook (Cable and Services Vol.) D-1134

**B. In Any New Rule The Commission Should Adopt An
Overlap Standard Which Is The Most Relevant
Factual Measure Of Industry Economic Behavior.**

Commission regulation of the television industry is becoming, properly, more surgically precise. When the industry was nascent and the Commission's experience with it limited, it is understandable that the Commission's guardianship of the public interest would cause it to adopt structural safeguards drawn more from theory than practical evaluation of industry behavior. In addition, research techniques and sources of information were less fully formed in the 1940's, 50's and 60's than today. Finally, in a less crowded, dynamic and competitive media universe, broad structural regulations, even if not surgically precise, intruded far less into efficient business life than they otherwise might have.

Given the current dynamic and competitive media environment and the more sophisticated analytic tools and information available to the Commission, it is incumbent on the Commission to draw its regulations as narrowly as possible and to insure that they are derived from a thorough understanding of the reality with which the television industry must deal, not abstract concepts of protecting the public interest with sweeping structural regulations.

This is particularly true when the Commission delves into the domain of economic power, its concentration and potential abuse. Economic power is derived, in varying degrees, from practical, factual circumstances which permit business conduct without regard or with little regard to limiting influences, such as competition or product substitutability. To assess economic power and regulate its undue concentration or abuse in the context of the duopoly rule, the Commission must have a focused and reliable analytic framework in which to evaluate the practical, factual circumstances most relevant to determining a station's economic power.

C. Despite Relative Geographic Proximity, Most Television Markets, Such As Buffalo and Rochester, Are Completely Separate and Distinct Economic Entities and Station Operations Are Largely Unique to Each Market.

Buffalo and Rochester are completely different cities each with their own unique character. Buffalo is a former "blue collar", rust-belt style industrial town that is undergoing a transformation common to cities of its kind which must move to a new industrial base.¹⁹ Rochester is very typical of modern high-technology cities built around a

¹⁹ See Affidavit of Willard J. Stone at 1.

few key industries.²⁰ Rochester's work force is more educated, affluent, transient and younger than Buffalo's.²¹ Buffalo is very international. Its proximity to Canada insures substantial commercial and cultural interaction with that country. And its tourism is a very important part of the local economy, right down to the bi-lingual street signs.²² Rochester's international character is more derived from the fact that on a per capita basis, it is a major international exporter.²³ The tone and demeanor of each city is quite distinctive.

Buffalo and Rochester are distinctive economically as well. They are classified as completely separate basic trading markets by the Rand McNally Commercial Atlas. Rochester has a higher effective buying income per household and more households with disposable income of \$25,000 or more.²⁴ Rochester also has more manufacturing units and accounts for a much greater manufacturing value added.²⁵

²⁰ See Affidavit of Heather Farnsworth at 1.

²¹ Id.

²² See Stone Affidavit at 2.

²³ See Farnsworth Affidavit at 2.

²⁴ See A.C. Nielsen DMA Test Market Profiles, 1991.

²⁵ See 1992 Rand McNally Commercial Atlas and Marketing Guide.

This distinctiveness carries over to the operation of WUHF-TV and WUTV. A telling piece of evidence concerning the independence of each station is the lack of correlation between their weekly program schedules. A representative recent week of the program schedules of both stations appear in Tables E and F. WUTV is on-the-air 164 hours per week; WUHF-TV for 151.5 hours. Of that time, only 2.5 hours during weekdays and 3 hours on the weekends constitutes identically scheduled programming on both stations. That is less than five percent (5%) of commonly scheduled programming.²⁶

Economically, the markets could not be more separate. Virtually none of the local advertising revenue of each station comes from businesses located in the other's market. In the case of Rochester it is zero percent (0%); for Buffalo is one percent (1%). Buffalo's one percent is actually misleading, since it is related merely to the administrative peculiarity that businesses with substantial Buffalo presence make their advertising decisions in their Rochester offices.²⁷

The stations are simply run as completely independent entities whose unique identities derive from their respective

²⁶ Another five (5) hours of the same programs are scheduled within one hour of each other, but that still means that less than seven percent (7%) of each station's schedule represents commonly or almost commonly scheduled programming.

²⁷ See Affidavit of Ronald C. Inman at 2.

economic and cultural markets which in no way overlap. Company policy encourages each station manager to act autonomously and what little interaction each station management has with the other is competitive and not collegial and certainly not collusive.²⁸

D. Grade A Service Contour Standard Is A More Contemporary And Factually Relevant Tool, Particularly In The Rochester And Buffalo Markets, For Addressing The Commission's Concerns As Expressed By The Duopoly Rule.

As noted above, with Commission goals of abundance and diversity largely achieved and secure, the Commission's residual concern in the duopoly rule should only be undue concentration and abuse of economic power. Particularly in light of the conclusion above that television markets are generally distinct despite relative geographic proximity, a Grade A service contour standard provides information far more pertinent to the measurement of economic power than a Grade B standard.

A television station's economic power is derived, in the first instance, from the total size of the potential audience for the station and the popularity of its programs with that

²⁸ See Stone and Farnsworth Affidavits at 2-3.

audience, i.e., total circulation and ratings.²⁹

Secondarily, this overall economic power is enhanced in those counties in which a station's service is dominant. Finally, economic power may also be drawn from management-led marketing techniques which leverage the station's actual strengths into greater perceived power.

A station's economic power should be assessed vis-a-vis the major constituencies with which it must interact in business. Basically, these constituencies are: (a) vendors supplying the station with services; (b) advertising agencies and advertisers; and (c) program suppliers, either syndicators or networks. Economic power in dealing with office service suppliers is not a direct concern of the Communications Act, but rather one of laws and regulations dealing with ordinary commercial practices. Accordingly, comments here are directed to an evaluation of a station's market power with regard to agencies/advertisers and program suppliers as conduct more pertinent to the public interest standard of the Communications Act.

In the advertising sphere, the dominant forces controlling economic power, i.e., the station's ability to

²⁹ Circulation and ratings are also a function of certain technical characteristics such as channel assignment and effective radiated power which determine the geographic reach of the station and, therefore, the total available audience. The relevance of these characteristics to the duopoly rule will be discussed later in Section in the context of a distinction between UHF and VHF services.

negotiate with advertisers for price, quantity and placement of advertising, are circulation and ratings.³⁰ This is particularly true at the national level. Most national media buys on a local television station are the product of a statistical, ratings based cost analysis. Subjective factors, such as evening out media mix and geographic coverage in a marketing strategy play a subordinate role.³¹

As is shown in Figure 1, ninety-two and two tenths percent (92.25) of WUTV (TV)'s and eighty-nine and four tenths percent (89.4%) of WUHF-TV's TV household population, circulation and, therefore, average primetime ratings potential is derived from viewership within their respective Grade A contours. Accordingly, it is fair to state that the service area represented within the Grade A contour is the dominant determinant of each station's economic power as expressed in terms of circulation and ratings potential and, therefore, vis-a-vis advertisers, particularly at the national level. It is also clear from Figure 1 that the markets for Rochester and Buffalo are completely separate and distinct from this perspective.

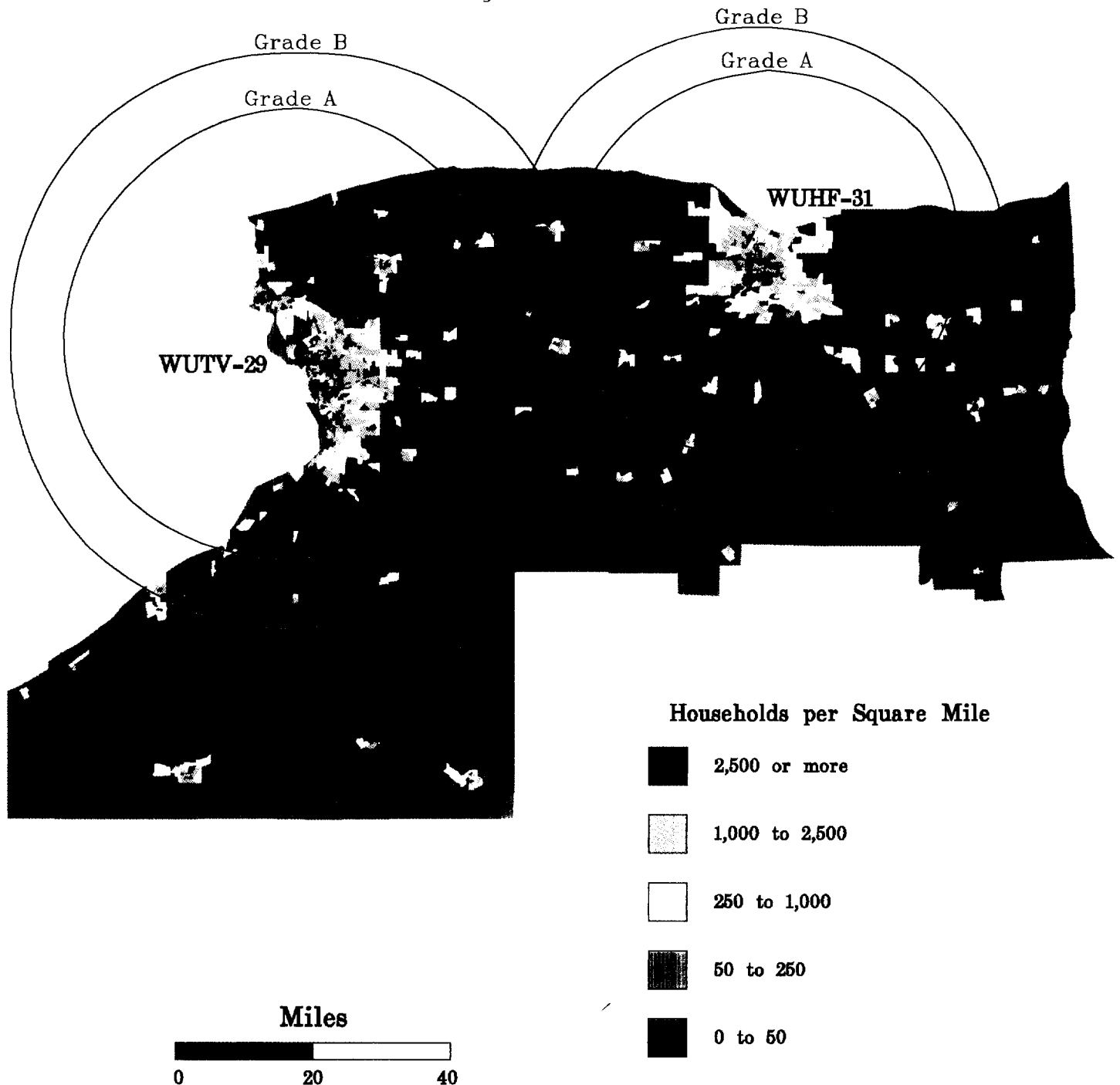
³⁰ See Inman Affidavit at 2. Circulation is defined by Arbitron Rating Services as the number of television households viewing a station with a certain frequency during a specified time frame. A rating point or fraction thereof measures the total number of television homes viewing a program expressed as a percentage of total television homes in the station's coverage area.

³¹ See Inman Affidavit at 2.

ACT III Television Stations

Household Density Within Broadcast Contours

Figure 1



Sources: 1990 U.S. Census (households by block groups)
1992 Television & Cable Factbook (grade A/B contours)